

## Conserving biodiversity through transboundary landscape approach\*

Transboundary landscape conservation and development programme is conceived to address the conservation and sustainable use of natural resources (biodiversity, rangelands, farming systems, forests, wetlands and watersheds) in landscapes defined by ecosystems rather than administrative boundaries. It elaborates on inter-linkages between ecosystems, upstream–downstream linkages related to ecosystem services, linkages to human lives and livelihoods, and linkages to global conservation and development goals<sup>1</sup>. The Convention on Biological Diversity (CBD) advocates the use of landscape and ecosystem approaches for managing biodiversity in the transboundary region<sup>2</sup>. In this context, the International Center for Integrated Mountain Development (ICIMOD), Nepal and its partners in the eight Regional Member Countries have identified seven transboundary landscapes for conserving biological diversity through transboundary landscape approach across the Hindu Kush Himalayan (HKH) region<sup>3</sup>. The Landscape Initiative for far Eastern Himalaya (Hi-LIFE) is one among the seven transboundary landscape initiatives involving three countries, namely India, China and Myanmar. Hi-LIFE was earlier known as Brahmaputra–Salween Landscape Conservation and Development Initiative (BSLDCI). It is one of the most intact and biodiversity-rich transboundary landscapes shared by the three countries mentioned above. Apart from being the meeting ground of three global biodiversity hotspots, i.e. Himalaya, Indo-Burma and Mountains of Southwest China, the landscape has a cluster of eight important protected areas that cover several ecoregions and taxa of transboundary nature. The Indian part of Hi-LIFE, currently extending over an area of 8598 sq. km in northeastern region of the country includes Namdapha National Park in Arunachal Pradesh as its core area. The Park, also identified as Namdapha Tiger Reserve, is an Eastern

Asiatic Regional Center of high diversity and endemism with a huge genetic reservoir of diverse species. However, this landscape is facing conservation and development challenges such as agriculture expansion, illegal trade of wildlife, limited conservation and development investments, inadequate capacity and skills, and climate change. Realizing the pressing necessity to protect this important landscape, G.B. Pant Institute of Himalayan Environment and Development (GBPIHED) is collaborating with ICIMOD as the nodal institute in India in order to develop a framework for cooperation, which will provide a basis for an integrated and participatory approach for conservation, adaptation and sustainable development within the context of global climate change.

GBPIHED North East Unit has been in the process of preparing essential documents like feasibility assessment report, conservation and development strategy (CDS) and comprehensive environmental and socio-economic monitoring strategy (CESMS) for Hi-LIFE India in consultation with national experts. GBPIHED with support from ICIMOD organized a National Consultation with objectives to review existing knowledge, practices and challenges in conservation and development issues and formulation of CDS and CESMS. The event was attended by policy-makers, administrators, subject experts from several institutes in India, civil societies and line departments of the Government of Arunachal Pradesh.

In his inaugural address, Muchu Mithi (Government of Arunachal Pradesh) stated that the holistic and participatory approach of the initiative, where the community is the focus of conservation and development, would help resolve serious conflicts between ecological conservation and development efforts. Sonam Chombay (Government of Arunachal Pradesh) outlined the paradigm shift from administrative boundary, and local to transboundary and regional approach of the initiative to address the issues of conservation and livelihood. C. D. Singh (State Forest Research Institute) observed that the proposed initiative was in line with contents of the CBD. Bandana Shakya (ICIMOD)

apprised the participants about diverse ‘transboundary landscape’ initiatives of ICIMOD and provided an overview of Hi-LIFE. P. K. Samal (GBPIHED) briefed the participants on the structure of the Consultation appraising them about the purpose and expected outcomes of the event. The event was divided into ten technical sessions, excluding a concluding session. These included six sessions on panel discussion, two sessions on group discussion/brainstorming and two sessions on presentations by the group leaders. Before each panel discussion, a presentation was made by Samal on the specific goals, objectives, contents and output expected from the panel.

The first technical session, chaired by Sarnam Singh (IIRS, Dehradun) and co-chaired by B. Talukdar (Aaranyak, Guwahati) focused on key national priority areas in Hi-LIFE India, conservation and development issues and challenges, prospects and opportunities for intervention. Documentation of biodiversity status, community and its issues like ownership of land, conflict between people and wildlife, promotion of alternative livelihood opportunities for communities, etc. were identified as key issues to be addressed in the initiative. The second technical session focused on implementation strategies, mechanisms, monitoring and evaluation in Hi-LIFE India. Chaired by R. M. Pant (NIRD&PR-NERC) and co-chaired by Amba Jamir (SDF-Nagaland), the session discussed the different elements of the conservation and development strategy. Transboundary networking and knowledge-sharing, scientific interventions at landscape level, documentation and preservation of indigenous ecological knowledge, SWOT and institutional analysis, livelihood upliftment of community, were identified as priority activities in the Initiative. The third technical session, chaired by D. N. Das (RGU, Arunachal Pradesh) and co-chaired by K. M. Jayahari (INSpire Network, New Delhi) analysed existing biodiversity management and development practices, including policy measures and enabling mechanisms at regional, national, state and local level. It emerged from the session that wide gaps prevail between international and national

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policies and implementation at ground level. Emphasizing the role of community institutions in biodiversity conservation, the experts outlined the necessity of instituting the Biodiversity Management Committees and developing People Biodiversity Register in streamlining conservation and development in Hi-LIFE India. The fourth session witnessed parallel group discussions on Hi-LIFE India conservation and development strategy, where the experts formed three groups and brainstormed on (1) key national priority areas in Hi-LIFE India, (2) implementation strategies, mechanisms, monitoring and evaluation, and (3) biodiversity management and development practices, including existing policy measures and enabling mechanisms respectively. In the fifth session, the group leaders or their nominees presented prioritized actions identified by each group.

The next five sessions focused on CESMS. Session 6 led by Sarman Singh as the chairperson, deliberated on key priority areas with regard to CESMS that included ecosystem functions and services, ecological processes, social and institutional governance, livelihood options, vulnerability, risk and hazards assessment. The technical session 7 focused on priority actions for improving long-term environmental monitoring (LTEM) in landscape and was chaired by R. M. Pant (NIRD&PR, Guwahati). The experts suggested that biological, social, physical and hydro-metrological data of

the landscape should be regularly collected and monitored during the entire period of project implementation. They also proposed that for monitoring of climatic data, Automatic Weather Station (AWS) may be installed in different field locations. The technical session 8 deliberated on the regional interventions to support LTEM. Chaired by D. N. Das (RGU) and co-chaired by N. Kar (RGU), the experts in the session identified priority interventions, expert organizations and mechanisms for LTEM. Setting up of permanent monitoring sites for floral and faunal biodiversity, periodic survey of RET/keystone species, continued assessment of socio-economic conditions and changes in demography and livelihood pattern, climate change monitoring by installation of AWS were major recommendations that emerged from the session. In technical session 9, experts again formed three groups for further brainstorming on various aspects of CESMS, where prioritized actions identified by each group were presented in technical session 10.

In brief, the Consultation succeeded in identifying key actions and priority areas keeping in view conservation and development challenges, implementation strategies, monitoring and evaluation mechanisms; biodiversity management and development practices, including existing policy measures and enabling mechanisms at regional, national, state and local level; priority actions for im-

proving LTEM; identification of regional interventions to support LTEM, and possible role and responsibility of potential national institutions and other agencies in Hi-LIFE India. In the concluding session, P. K. Samal highlighted the future course of action for Hi-LIFE India. The Consultation concluded with remarks from Bandana Shakya that there is a need for collaborative effort to support conservation of rich and unique biodiversity through conservation-linked development strategies. Also, there is a need to develop complementary actions among countries sharing the Hi-LIFE landscape to help the communities adapt to changing climate regime and to facilitate resilience of both ecosystem and the society.

1. ICIMOD Working Paper 2012/7, ICIMOD, Kathmandu, 2012.
2. Global Biodiversity Outlook 3, Secretariat of the Convention on Biological Diversity, 2010.
3. ICIMOD Internal Report, Towards Developing the Brahmaputra–Salween Landscape Conservation and Development Initiative, 2014.

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